Special Issue

Astrophysical Neutrinos in the Multi-Messenger Era and Their Broken Symmetries

Message from the Guest Editor

- Neutrino astronomy is the most promising among the astroparticle messengers. Neutrinos are emitted from the sun to supernovas, AGN, mergers, and all other sources. Given the nature of the neutrinos, they are the most direct indicator of weak interaction physics from astrophysical phenomena. This makes them the most reliable messenger to the others: cosmic rays, gammas, and gravitational waves. Furthermore, studying astrophysical neutrinos opens channels in neutrino physics which are yet to be fully understood and included in the standard model of particles, encouraging explorations of flavor oscillations, mass, chirality, and other broken symmetries.
- In an era of multi-messengers and new installations of detectors around the world, this Special Issue aims to collect novel research and experimental results around neutrino astronomy, from new analysis techniques and updates on technology to their interconnections with other messengers and recent advances in neutrino physics in the astrophysical sector.

Guest Editor

Dr. Alessio Porcelli
CITEVA, Universidad de Antofagasta, Antofagasta 1240000, Chile

Deadline for manuscript submissions

28 February 2026

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/si/238326

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

mdpi.com/journal/symmetry

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/journal/symmetry

About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

Prof. Dr. Sergei Odintsov
1. ICREA, 08010 Barcelona, Spain
2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)

MDPI